

ABSTRACT

The present invention relates to a method enabling either the selection, the modification of existing and/or the creation of newly developed polyester based polymer materials which may provide an improved response to the application of a local shear and/or extensional deformation inside the polyester based polymer melt in injection stretch blow molding (ISBM). In addition, a method for manufacturing a polymer article is provided comprising injecting a molten polyester based polymer in a preform mold for converting it in a preform while applying a shear and/or extensional deformation on the polyester based polymer melt, wherein applying shear and/or extensional deformation on the polyester based polymer melt comprises selectively modifying the flow path of the molten polymer as a function of local pressure profile over at least part of the flow path, said local pressure profile being determined as a function of optimized response of the polyester based polymer melt to the applied local shear and/or extensional deformation over at least said part of the flow path.

[Figure 1]